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# Installation Instructions USB Interface Cable

## **KERN DBS-A02**

Version 2.0  
01/2014  
GB

**DBS-A02-IA-e-1420**



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# KERN DBS-A02

Version 2.0 01/2014

## Installation Instructions USB Interface Cable

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## 1 Introduction

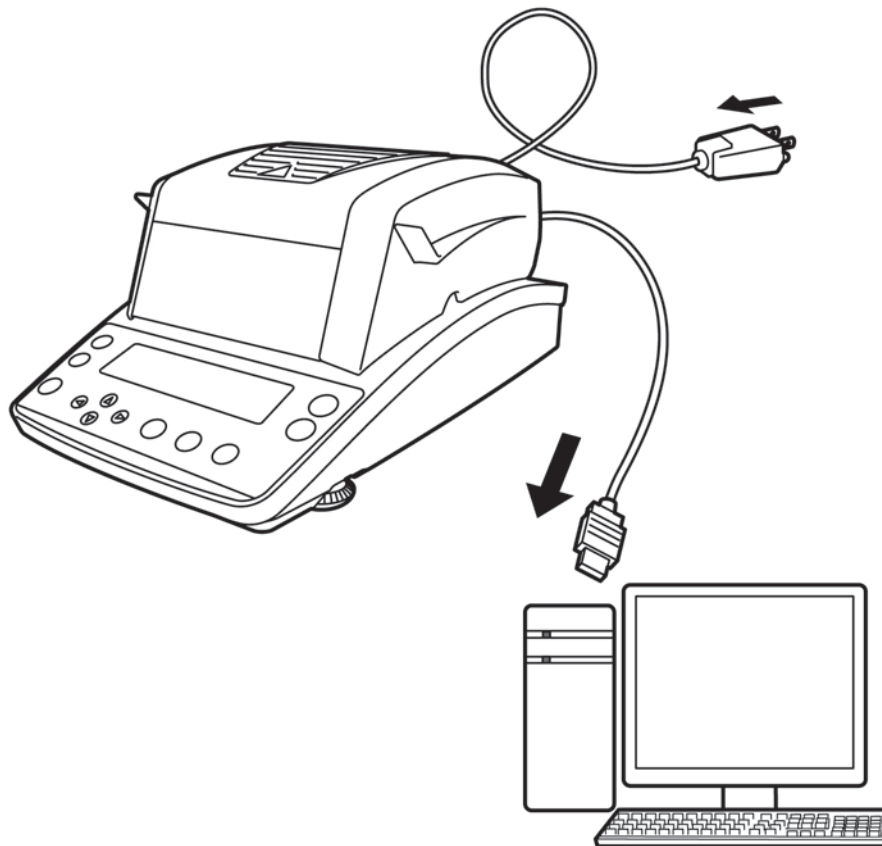
The UBS interface supports bidirectional data transfer from a device to a computer. UBS data is conducted to a virtual port.

The scope of delivery for the USB interface cable includes a CD containing software drivers for installation the required virtual ports on the computer.

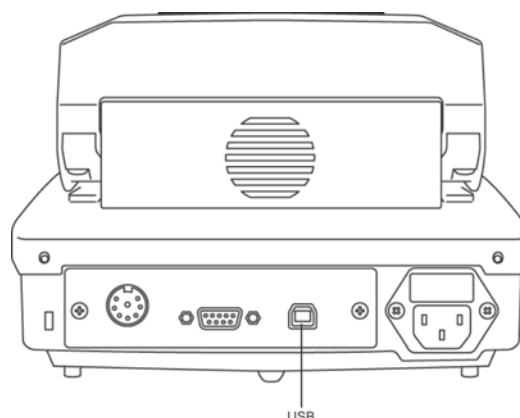
We recommend our transfer software 'Balance Connection KERN SCD 4.0' for the import of data to a PC program.

## 2 USB connection

Illustration example KERN DBS



1. Disconnect the device meter from the mains.
2. For installation of USB driver see chpt. 3.
3. Plug your USB cable into the USB port of your device.



4. Plug the USB connector into the USB port on the computer.
5. Turn on device.
6. For establishing the COM Port see chpt. 3.3.

### 3 How to install a driver



- Ensure that the device and the PC are not connected to the USB cable.
- Administrator rights are required.

#### 3.1 EWJ

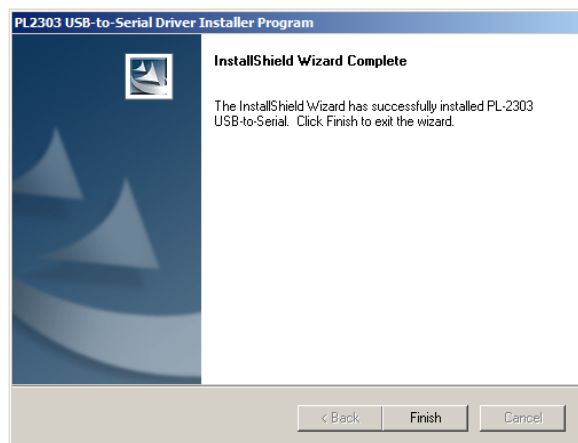
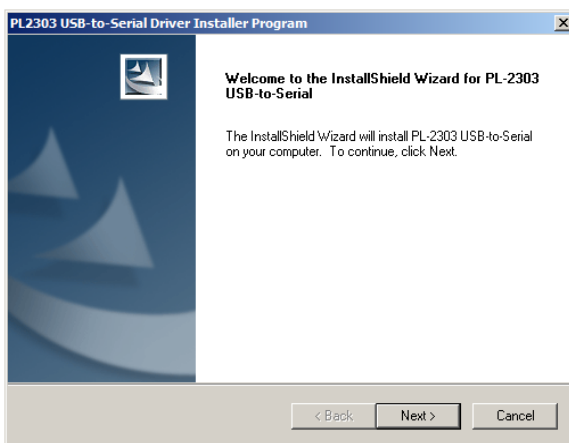
⇒ Please insert the included driver CD into the CD-drive of your computer and open the drive in Windows Explorer.

Name ^	Änderungsdatum	Typ
DBS	24.01.2014 09:41	Dateiordner
EWJ	24.01.2014 09:41	Dateiordner

⇒ Open the folder named „EWJ“ and execute the „exe“ file.

Name ^	Änderungsdatum	Typ
PL-2303 USB Driver.exe	02.08.2011 15:54	Anwendung

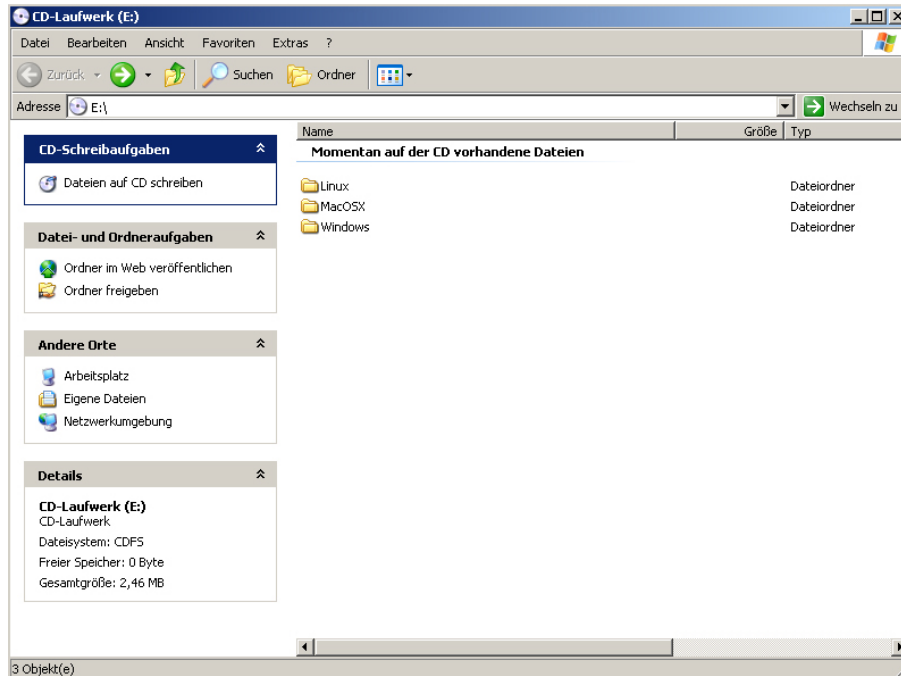
⇒ Confirm the dialogs with the „Next“ button. The driver will be installed.



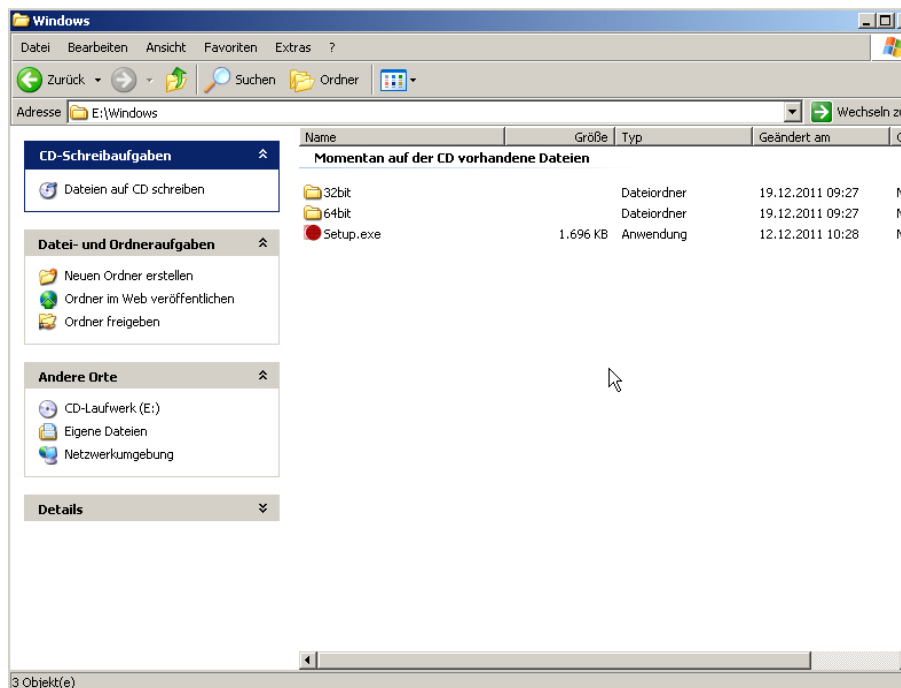
With the operating system Microsoft Windows 8 and an active internet connection, it is possible, that a non-compatible driver is installed by Windows Update. If this is the case, certain versions of the balance may not work with the update driver and will be listed as erroneous in the device manager (also see section 3.3). Here, the “previous version” of the driver has to be selected in the property dialog of the COM port corresponding to the balance.

### 3.2 DBS

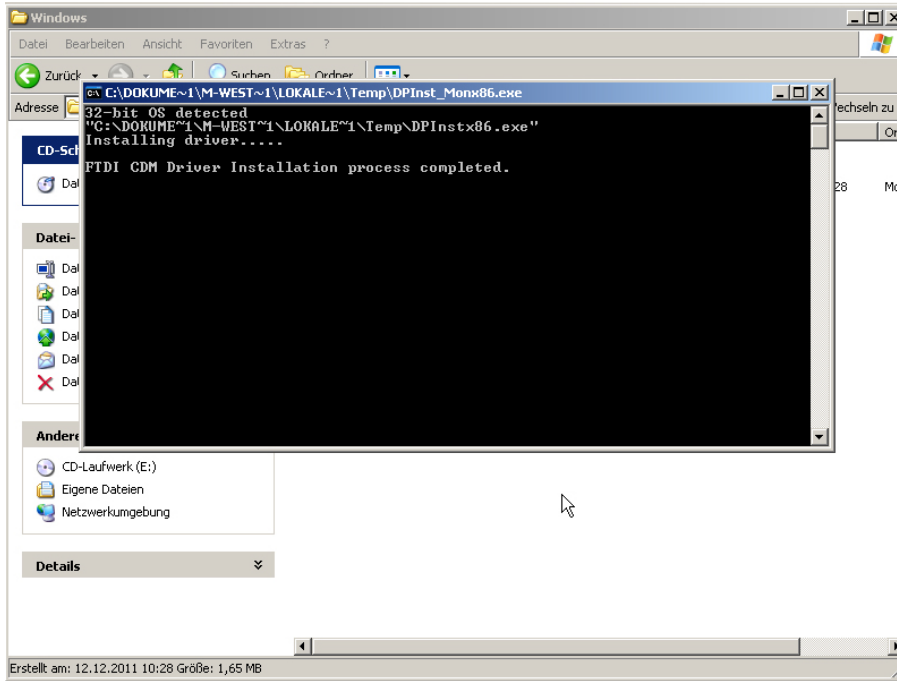
- ⇒ Insert the supplied driver CD into your CD drive and open the drive in Windows Explorer..
- ⇒ Open the folder named „DBS“
- ⇒ Select the driver version compatible with your system.



### Example Windows:



⇒ To start driver installation, run the 'setup.exe' file.



For more information about driver installation see <http://www.ftdichip.com/index.html>

**Currently Supported VCP Drivers:**

Operating System	Release Date	Processor Architecture							Comments
		x86 (32-bit)	x64 (64-bit)	PPC	ARM	MIPSII	MIPSIV	SH4	
Windows*	2011-04-12	2.08.14	2.08.14	-	-	-	-	-	2.08.14 WHQL Certified Available as setup executable <a href="#">Release Notes</a>
	2011-08-26	2.08.17(Beta)	2.08.17(Beta)	-	-	-	-	-	
Linux	2009-05-14	1.5.0	1.5.0	-	-	-	-	-	Included in 2.6.31 kernel and later <a href="#">Requir...</a>

### 3.3 Define allocation of virtual port

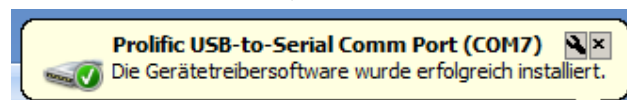


- Ensure that the device and PC are connected via the USB cable.
- Turn on device.

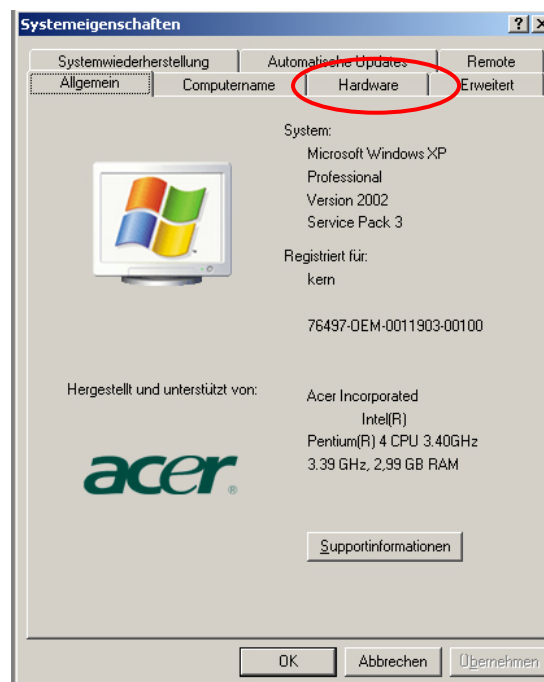
⇒ Wait until the message “Hardware has been successfully installed and is ready for use” appears on the screen.



⇒ Starting with Windows 7, the name of the new virtual COM port will be shown in the info box appearing on the bottom left of the screen (“COM7”):

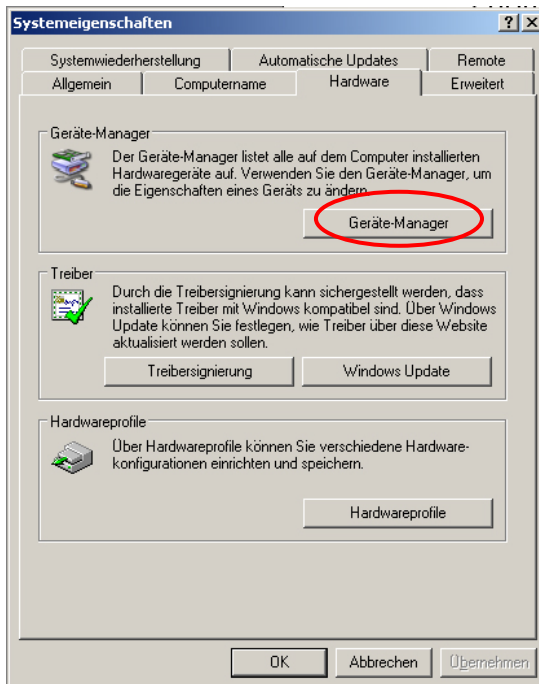


⇒ Call device manager by pressing the Windows and Pause keys.



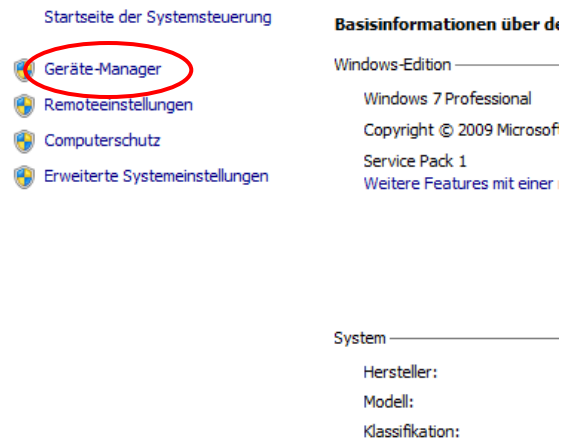
⇒ Select “Hardware” folder

## Until Windows XP:



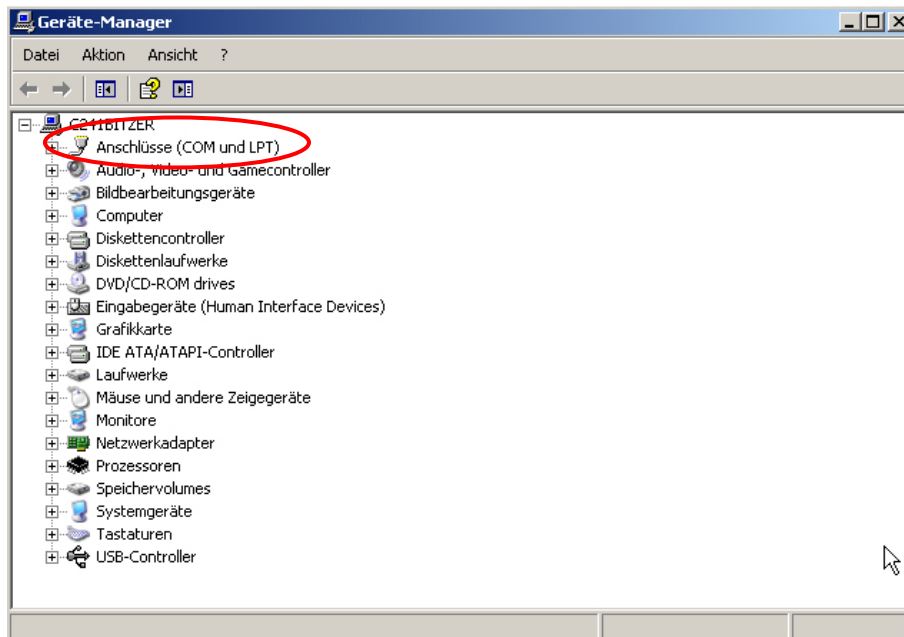
⇒ Click on Device Manager

## Starting with Windows 7:

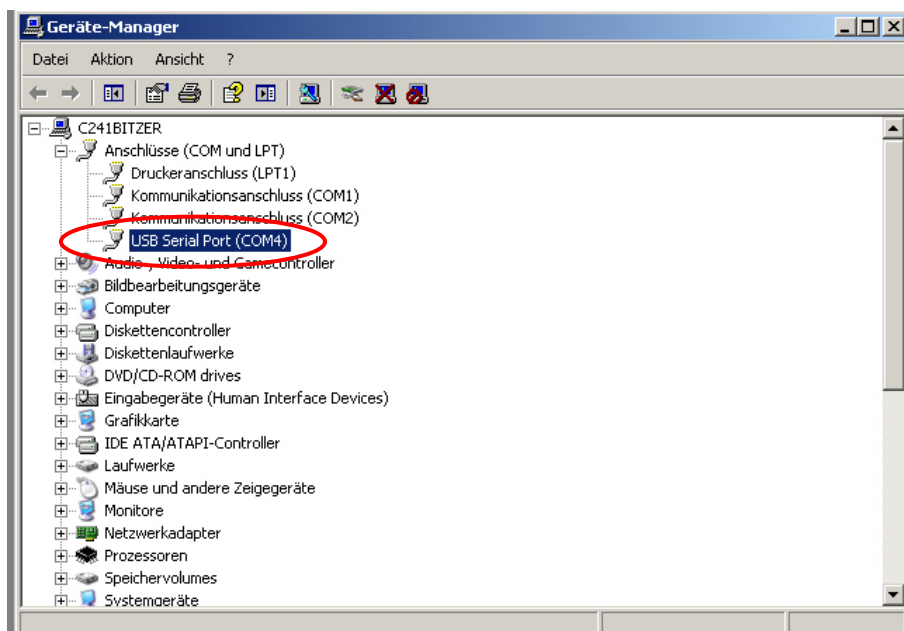


English





- ⇒ Extend the “Ports” entry by clicking on the corresponding plus icon. The correct entry is named depending on the type of scale:
  - **DBS:** „USB Serial Port“
  - **EWJ:** „Prolific USB-to-Serial Comm Port“
- ⇒ Select the displayed COM Port, such as COM4, accordingly in the transfer software, see chap. 5.



## 4 Device settings

The communication parameters (such as baud rate, bits and parity) of the device and the transfer software must be concordant for data transfer to take place. Additionally, the device has to be configured for USB communication. Please refer to the operating manual for more detailed instructions.

### 4.1 EWJ

For USB communication, the balance has to be set to mode "S USB" in menu "F3 COM" (see Chapter 9 of the manual included with the scale). Additionally, in this menu, the communication parameters can be adjusted accordingly.

### 4.2 DBS

#### 4.2.1 Interface parameters

1. Press the **Menu** button to access the menu and the first menu item "**PRoGRM**" will be displayed.



2. Use the navigation buttons **↓** **↑** to select menu item „**CoM.SET**“.



3. Confirm with **ENTER** key, the currently preset port will be displayed

**oUT.1 = RS232**

**oUT.2 = USB**

4. Use the navigation keys to select **↓** **↑** „**oUT.2**“.



5. Press **ENTER** to save input and the currently preset baud rate will be displayed.

6. Use the navigation buttons **↓** **↑** to select the desired setting.



7. Press **ENTER** to save input, the next interface parameter will be displayed.

Set all interface parameters in turn and then repeat steps 6 and 7 in each case.

- **Baud rate**

Selectable settings:

Display	B.1200*	B.2400	B.4800	B.9600	B.19.2k	B.38.4k
Baud rate	1200bps	2400bps	4800bps	9600bps	19.2k bps	38.4k bps

- **Parity**

Selectable settings:

Display	P.NoNE*	P.oDD	P.EVEN
Parity	Small parity, 8 bit	Odd parity, 7 bit	Straight parity, 7 bit

- **Stop bit**

Selectable settings:

Display	SToP. 1*	SToP. 2
Stop bit	1 bit	2 bit

- **Handshake**

Selectable settings:

Display	HS.HW*	HS.SW	HS.TiM	HS.oFF
Handshake	Hardware handshake	Software handshake	Timer handshake	No handshake

- **Delimiter (terminator)**

Selectable settings:

Display	CR*	LF	CR+LF
Terminator	CR	LF	CR+LF

⇒ Press **ESC** to return to Moisture analysis mode.



- Factory settings are marked by \*.
- For further information on how to operate your moisture meter please refer to the operating instructions enclosed with each device.

### 4.3 Output interval

⇒ Press the Menu button to access the menu and the first menu item “**PRoGRM**” will be displayed.



⇒ Use the navigation keys ↓ ↑ to select the menu item „**PRINT**“ .

⇒ Acknowledge with **ENTER** key, “**INTVAL**“ will be displayed.

⇒ Press **ENTER** to save input and the currently preset output interval will be displayed.

⇒ Use the navigation buttons ↓ ↑ to select the desired setting.

#### Selectable settings:

oFF	No data output
1SEC	Output interval 1 sec
2SEC	Output interval 2 sec
5SEC	Output interval 5 sec
10SEC	Output interval 10 sec
30SEC	Output interval 30 sec
1MIN	Output interval 1 min
2MIN	Output interval 2 min
5MIN	Output interval 5 min
10MIN	Output interval 10 min
FINAL	Data output at end of measurement

⇒ Press **ENTER** to save input and the equipment will revert to the menu.

⇒ Press **ESC** to return to Moisture analysis mode.

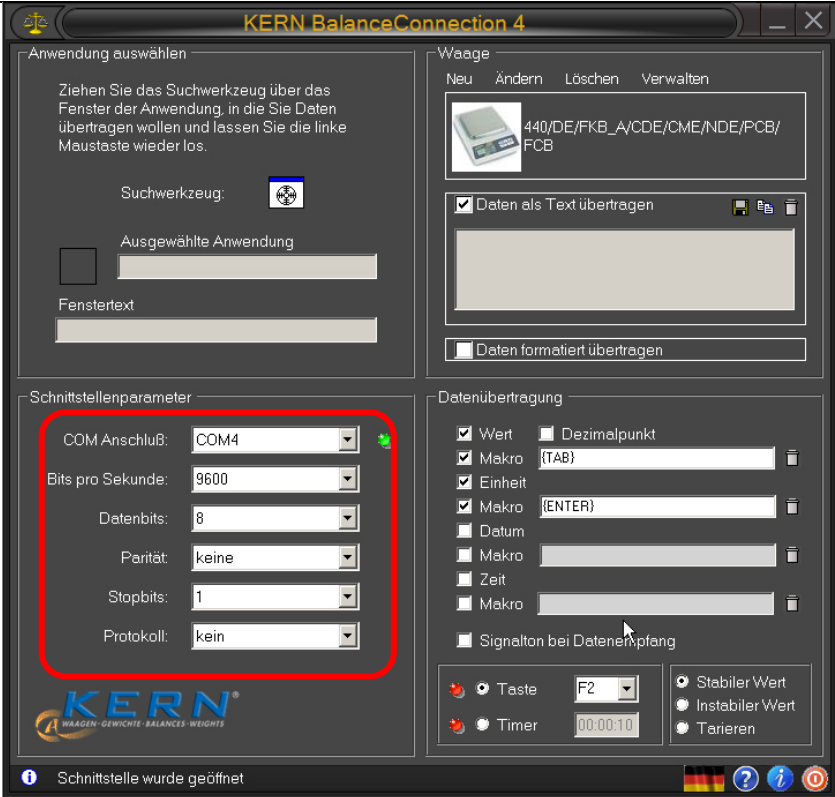


## 5 Communication with the device

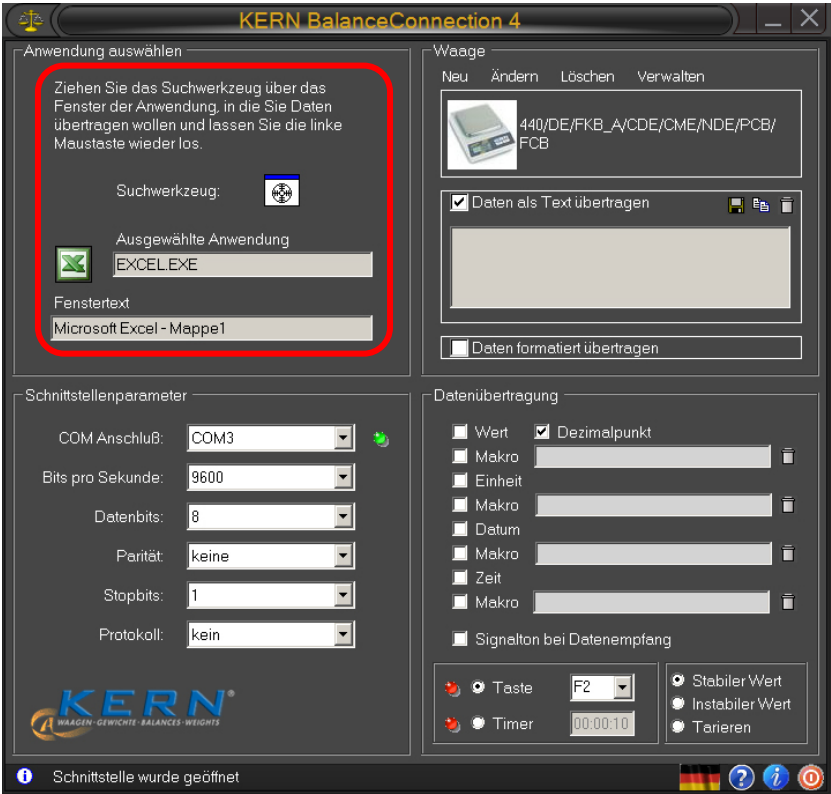
Example using transfer software **Balance Connection KERN SCD 4.0** and **moisture analyser KERN DBS**:

**i** For further information on the installation / operation of “Balance Connection KERN SCD 4.0” please refer to the operating instructions enclosed with the software.

⇒ Check whether the communication parameters of your moisture meter and the transfer software are concordant.

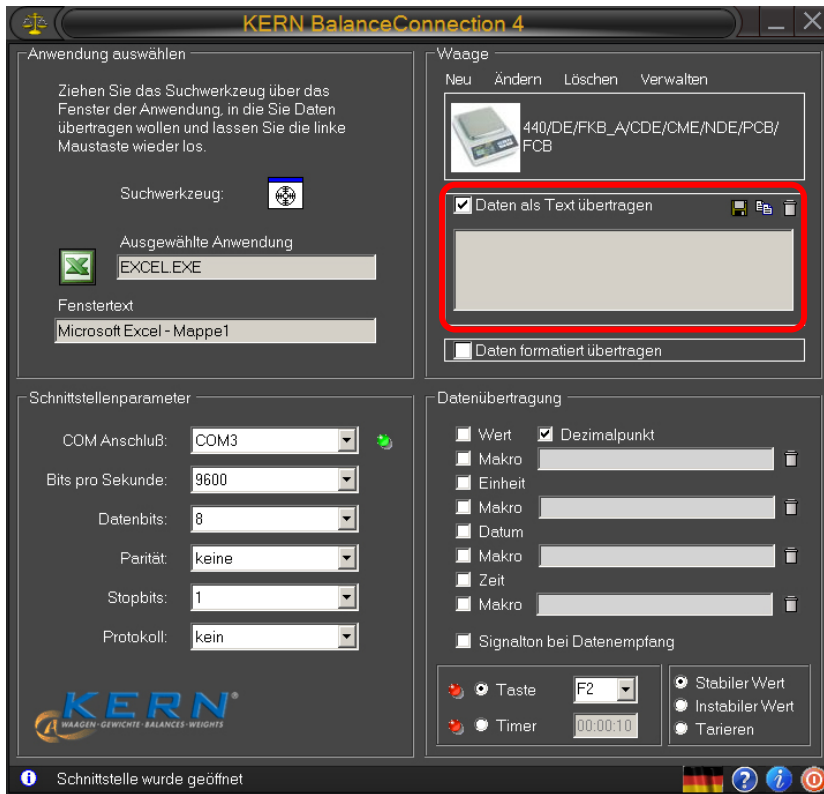
For moisture meter settings see chap. 4.2	PC / Balance Connection KERN SCD 4.0
<div style="border: 2px solid red; padding: 10px; margin: 10px;"> <p>COM 4, see chap. 3.2            Baud rate 9600 Bits/s            Data bits: 8            Parity none            Stop bits 1</p> </div>	

In the transfer software, select the application into which you want to transfer your data. Start your application program, keep it opened in the background and left-click your mouse, keeping the mouse button pressed down, so that you can drag the searching tool with your selected application to the window of your application and then release the mouse button. Afterwards the application selected by you will appear in the box under SELECTED APPLICATION (e.g. Microsoft Excel).



English

⇒ Click on “Transfer data as text”, and set the cursor in the application program (such as Microsoft Excel).



⇒ Start moisture determination for a sample

Data output for header will commence immediately after moisture determination was started. Depending on the setting for the output interval (See chap. 4.2), output of measured values will take place for instance every 2 minutes.

Once drying has been completed, the measured result will be displayed (footer)

Example protocol:

	A	B
1	KERN & Sohn GmbH	
2	TYPE DBS 60-3	
3	SN WB11AH0003	
4	ID 0000	
5	CODE 0002	
6	DATE 11-12-15	
7	TIME 18:54	
8	PNO. 1	
9	UNIT M/W	
10	MODE TIME	
11	TEMP 120C	
12	STOP 00:15	
13		
14	Wet Wg	20.081
15		
16	TIME	M/W%
17	00:00:00	0.00
18	00:02:00	0.19
19	00:04:00	0.29
20	00:06:00	0.35
21	00:08:00	0.38
22	00:10:00	0.38
23	00:12:00	0.38
24	00:14:00	0.38
25	*00:15:00	0.38
26		
27	Dry Wg	20.004
28		
29		
30		
31		
32		
33		
34		

Header:  
Company  
Model  
Serial no.  
ID no.  
Sample description  
Date  
Time  
Program no.  
Unit Display of results  
Drying mode  
Drying temperature such as 120 °C  
Cut off criteria such as 2 min  
  
Initial weight such as 20.081g

Measured value output as per set output interval such as every 2 min

Footer:  
Measured result such as remaining weight 20.004g